State of Utah
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY

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Title V Operating Permit

PERMIT NUMBER: 4700003001
DATE OF PERMIT: August 26, 1998
Date of Last Revision: November 9, 2000

This Operating Permit is issued to, and applies to the following:

Name of Permittee:

SF Phosphates Limited Company
9401 North Highway 191
Vernal, UT 84078

Permitted Location:

Vernal Phosphate Operations
9401 North Hwy 191
Vernal, UT 84078

UTM coordinates: 4,495,249 meters Northing, 628,328 meters Easting
SIC code: 1475

ABSTRACT

S.F. Phosphates Limited, operates a phosphate plant near Vernal, Utah. The operations consist of strip mining to remove topsoil and overburden, ore crushing and conveying, and rock grinding and concentration. The overburden operations are accomplished by blasting to loosen material and transportation by various earth moving equipment. The ore too is blasted and transported by truck and material handling equipment to a storage pile, then transported by conveyor to a Semi-Autogenous Grinding (SAG) mill where water is added to form a slurry. The ore is ground, then screened with oversized material being recycled through a secondary ball mill. Product is then piped to the concentrator. Product slurry goes through primary deslime cyclones-hydrosizers where slimes and fines are removed and sent to a tailings pond. The product is further processed through several steps of conditioning, flotation, and thickening. The wet phosphate rock concentrate is then sent via pipeline to a fertilizer plant in Rock Springs, Wyoming. A drying capability also exists which consists of a natural gas fired rotary dryer. The source is major for PM_{10}. S.F. Phosphates is also subject to the New Source Performance Standards (NSPS) at 40 CFR 60 Subpart A, General Provisions and Subpart NN, Standards of Performance for Phosphate Rock Plants.
UTAH AIR QUALITY BOARD

By:

Richard W. Sprott, Acting Executive Secretary

Prepared By:

David Beatty

Operating Permit History

8/26/1998 - Permit issued	Action initiated by an initial operating permit application	
11/9/2000 -Permit modified	Action initiated by an administrative amendment (initiated by source)	to add two Smart Ash waste incinerators to the emission units list. These two units have no unit specific applicable requirements.

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Issued under authority of Utah Code Ann. Section 19-2-104 and 19-2-109.1, and in accordance with Utah Administrative Code R307-415 Operating Permit Requirements.

All definitions, terms and abbreviations used in this permit conform to those used in Utah Administrative Code R307-101 and R307-415 (Rules), and 40 Code of Federal Regulations (CFR), except as otherwise defined in this permit. Unless noted otherwise, references cited in the permit conditions refer to the Rules.

Where a permit condition in Section I, General Provisions, partially recites or summarizes an applicable rule, the full text of the applicable portion of the rule shall govern interpretations of the requirements of the rule. In the case of a conflict between the Rules and the permit terms and conditions of Section II, Special Provisions, the permit terms and conditions of Section II shall govern except as noted in Provision I.M, Permit Shield.

Section I: GENERAL PROVISIONS

I.A. **Federal Enforcement.**

All terms and conditions in this permit, including those provisions designed to limit the potential to emit, are enforceable by the EPA and citizens under the Clean Air Act of 1990 (CAA) except those terms and conditions that are specifically designated as "State Requirements". (R307-415-6b)

I.B. **Permitted Activity(ies).**

Except as provided in R307-415-7b(1), the permittee may not operate except in compliance with this permit. (See also Provision I.E, Application Shield)

I.C. **Duty to Comply.**

I.C.1 The permittee must comply with all conditions of the operating permit. Any permit noncompliance constitutes a violation of the Air Conservation Act and is grounds for any of the following: enforcement action; permit termination; revocation and reissuance; modification; or denial of a permit renewal application. (R307-415-6a(6)(a))

I.C.2 It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (R307-415-6a(6)(b))

I.C.3 The permittee shall furnish to the Executive Secretary, within a reasonable time, any information that the Executive Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Executive Secretary copies of records required to be kept by this permit or, for information claimed to be confidential, the permittee may furnish such records directly to the EPA along with a claim of confidentiality. (R307-415-6a(6)(e))

I.C.4 This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance shall not stay any permit condition, except as provided under R307-415-7f(1) for minor permit modifications. (R307-415-6a(6)(c))

I.D. **Permit Expiration and Renewal.**

I.D.1 **This permit is issued for a fixed term of five years and expires on August 26, 2003.** (R307-415-6a(2))

I.D.2 Application for renewal of this permit is due by February 26, 2003. An application may be submitted early for any reason. (R307-415-5a(1)(c))

I.D.3 An application for renewal submitted after the due date listed in I.D.2 above shall be accepted for processing, but shall not be considered a timely application and shall not relieve the permittee of any enforcement actions resulting from submitting a late application. (R307-415-5a(5))

I.D.4 Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted consistent with R307-415-7b (see also Provision I.E, Application Shield) and R307-415-5a(1)(c) (see also Provision I.D.2). (R307-415-7c(2))

I.E. **Application Shield.**

If the permittee submits a timely and complete application for renewal, the permittee's failure to have an operating permit will not be a violation of R307-415, until the Executive Secretary takes final action on the permit renewal application. In such case, the terms and conditions of this permit shall remain in force until permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to R307-415-7a(3), and as required by R307-415-5a(2), the applicant fails to submit by the deadline specified in writing by the Executive Secretary any additional information identified as being needed to process the application. (R307-415-7b(2))

I.F. **Severability.**

In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force. (R307-415-6a(5))

I.G. **Permit Fee.**

I.G.1 The permittee shall pay an annual emission fee to the Executive Secretary consistent with R307-415-9. (R307-415-6a(7))

I.G.2 The emission fee shall be due on October 1 of each calendar year or 45 days after the source receives notice of the amount of the fee, whichever is later. (R307-415-9(4)(a))

I.H. **No Property Rights.**

This permit does not convey any property rights of any sort, or any exclusive privilege. (R307-415-6a(6)(d))

I.I. **Revision Exception.**

No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (R307-415-6a(8))

I.J. **Inspection and Entry.**

I.J.1 Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Executive Secretary or an authorized representative to perform any of the following:

I.J.1.a Enter upon the permittee's premises where the source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit. (R307-415-6c(2)(a))

I.J.1.b Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit. (R307-415-6c(2)(b))

I.J.1.c Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practice, or operation regulated or required under this permit. (R307-415-6c(2)(c))

I.J.1.d Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements. (R307-415-6c(2)(d))

I.J.2 Any claims of confidentiality made on the information obtained during an inspection shall be made pursuant to Utah Code Ann. Section 19-1-306. (R307-415-6c(2)(e))

I.K. **Certification.**

Any application form, report, or compliance certification submitted pursuant to this permit shall contain certification as to its truth, accuracy, and completeness, by a responsible official as defined in R307-415-3. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (R307-415-5d)

I.L. **Compliance Certification.**

I.L.1 Permittee shall submit to the Executive Secretary an annual compliance certification, certifying compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall be submitted no later than January 10, 1999 and that date each year following until this permit expires. The certification shall include all the following (permittee may cross-reference this permit or previous reports): (R307-415-6c(5))

I.L.1.a The identification of each term or condition of this permit that is the basis of the certification;

I.L.1.b The identification of the methods or other means used by the permittee for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the monitoring and related recordkeeping and reporting requirements in this permit. If necessary, the permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information;

I.L.1.c The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in Provision I.L.1.b. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred; and

I.L.1.d Such other facts as the Executive Secretary may require to determine the compliance status.

I.L.2 The permittee shall also submit all compliance certifications to the EPA, Region VIII, at the following address or to such other address as may be required by the Executive Secretary: (R307-415-6c(5)(d))

Office of Enforcement, Compliance and Environmental Justice
(mail code 8ENF)
EPA, Region VIII
999 18th Street, Suite 300
Denver, CO 80202-2466

I.M. **Permit Shield.**

I.M.1 Compliance with the provisions of this permit shall be deemed compliance with any applicable requirements as of the date of this permit, provided that:

I.M.1.a Such applicable requirements are included and are specifically identified in this permit, or (R307-415-6f(1)(a))

I.M.1.b Those requirements not applicable to the source are specifically identified and listed in this permit. (R307-415-6f(1)(b))

I.M.2 Nothing in this permit shall alter or affect any of the following:

I.M.2.a The emergency provisions of Utah Code Ann. Section 19-1-202 and Section 19-2-112, and the provisions of the CAA Section 303. (R307-415-6f(3)(a))

I.M.2.b The liability of the owner or operator of the source for any violation of applicable requirements under Utah Code Ann. Section 19-2-107(2)(g) and Section 19-2-110 prior to or at the time of issuance of this permit. (R307-415-6f(3)(b))

I.M.2.c The applicable requirements of the Acid Rain Program, consistent with the CAA Section 408(a). (R307-415-6f(3)(c))

I.M.2.d The ability of the Executive Secretary to obtain information from the source under Utah Code Ann. Section 19-2-120, and the ability of the EPA to obtain information from the source under the CAA Section 114. (R307-415-6f(3)(d))

I.N. **Emergency Provision.**

I.N.1 An "emergency" is any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. (R307-415-6g(1))

I.N.2 An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the affirmative defense is demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

I.N.2.a An emergency occurred and the permittee can identify the causes of the emergency. (R307-415-6g(3)(a))

I.N.2.b The permitted facility was at the time being properly operated. (R307-415-6g(3)(b))

I.N.2.c During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in this permit. (R307-415-6g(3)(c))

I.N.2.d The permittee submitted notice of the emergency to the Executive Secretary within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. This notice fulfills the requirement of Provision I.S.2.c below. (R307-415-6g(3)(d))

I.N.3 In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof. (R307-415-6g(4))

I.N.4 This emergency provision is in addition to any emergency or upset provision contained in any other section of this permit. (R307-415-6g(5))

I.O. **Operational Flexibility.**

Operational flexibility is governed by R307-415-7d(1).

I.P. **Off-permit Changes.**

Off-permit changes are governed by R307-415-7d(2).

I.Q. **Administrative Permit Amendments.**

Administrative permit amendments are governed by R307-415-7e.

I.R. **Permit Modifications.**

Permit modifications are governed by R307-415-7f.

I.S. **Records and Reporting.**

I.S.1 Records.

I.S.1.a The records of all required monitoring data and support information shall be retained by the permittee for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-charts or appropriate recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. (R307-415-6a(3)(b)(ii)

I.S.1.b For all monitoring requirements described in Section II, Special Provisions, the source shall record the following information, where applicable: (R307-415-6a(3)(b)(i))

I.S.1.b.1 The date, place as defined in this permit, and time of sampling or measurement.

I.S.1.b.2 The date analyses were performed.

I.S.1.b.3 The company or entity that performed the analyses.

I.S.1.b.4 The analytical techniques or methods used.

I.S.1.b.5 The results of such analyses.

I.S.1.b.6 The operating conditions as existing at the time of sampling or measurement.

I.S.1.c Additional record keeping requirements, if any, are described in Section II, Special Provisions.

I.S.2 Reports.

I.S.2.a Monitoring reports shall be submitted to the Executive Secretary every six months, or more frequently if specified in Section II. All instances of deviation from permit requirements shall be clearly identified in the reports. (R307-415-6a(3)(c)(i))

I.S.2.b All reports submitted pursuant to Provision I.S.2.a shall be certified by a responsible official in accordance with Provision I.K of this permit. (R307-415-6a(3)(c)(i)

I.S.2.c The Executive Secretary shall be notified promptly of any deviations from permit requirements including those attributable to upset conditions as defined in this permit, the probable cause of such deviations, and any corrective actions or preventative measures taken. **Prompt, as used**

in this condition, shall be defined as written notification within 14 days. Deviations from permit requirements due to unavoidable breakdowns shall be reported in accordance with the provisions of R307-107. (R307-415-6a(3)(c)(ii))

I.S.3 Notification Addresses.

I.S.3.a All reports, notifications, or other submissions required by this permit to be submitted to the Executive Secretary are to be sent to the following address or to such other address as may be required by the Executive Secretary:

Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820
Phone: 801-536-4000

I.S.3.b All reports, notifications or other submissions required by this permit to be submitted to the EPA should be sent to one of the following addresses or to such other address as may be required by the Executive Secretary:

For annual compliance certifications	For reports, notifications, or other correspondence related to permit modifications, applications, etc.
Environmental Protection Agency, Region VIII Office of Enforcement, Compliance and Environmental Justice (mail code 8ENF) 999 18th Street, Suite 300 Denver, CO 80202-2466	Environmental Protection Agency, Region VIII Office of Partnerships & Regulatory Assistance Air & Radiation Program (mail code 8P-AR) 999 18th Street, Suite 300 Denver, CO 80202-2466 Phone: 303-312-6440

I.T. **Reopening for Cause.**

I.T.1 A permit shall be reopened and revised under any of the following circumstances:

I.T.1.a New applicable requirements become applicable to the permittee and there is a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the terms and conditions of this permit have been extended pursuant to R307-415-7c(3), application shield. (R307-415-7g(1)(a))

I.T.1.b The Executive Secretary or EPA determines that this permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit. (R307-415-7g(1)(c))

I.T.1.c EPA or the Executive Secretary determines that this permit must be revised or revoked to assure compliance with applicable requirements. (R307-415-7g(1)(d))

I.T.1.d Additional applicable requirements are to become effective before the renewal date of this permit and are in conflict with existing permit conditions. (R307-415-7g(1)(e))

I.T.2 Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. (R307-415-7g(2))

I.U. **Inventory Requirements.**

I.U.1 An emission inventory shall be submitted in accordance with the procedures of R307-150, Emission Inventories. (R307-150)

I.U.2 A Hazardous Air Pollutant Inventory shall be submitted in accordance with the procedures of R307-155, Hazardous Air Pollutant Inventory. (R307-155)

Section II: SPECIAL PROVISIONS

II.A. **Emission Unit(s) Permitted to Discharge Air Contaminants.**
(R307-415-4(3)(a) and R307-415-4(4))

II.A.1 **Topsoil Removal Operations** (designated as 1)
Unit Description: Consisting of dozers removing and piling topsoil, loading into trucks, hauling, unloading and reclamation activities.

II.A.2 **Overburden Removal Operations** (designated as 2)
Unit Description: Overburden drilling, blasting, dragline operations, loading, hauling, dumping, dozing and reclamation activities.

II.A.3 **Ore Removal Operations** (designated as 3)
Unit Description: Ore drilling, blasting, loading, hauling and dumping activities. Also includes grading as part of clean up activities.

II.A.4 **Ore Conveying and Crushing Operations** (designated as 4)
Unit Description: Crushing and conveying activities to include transfer points and stacker. Also includes conveying to Semi-Autogenous Grinding (SAG) mill with a baghouse on SAG mill feed belt.

II.A.5 **Semi-Autogenous Grinding (SAG) Mill** (designated as 5)
Unit Description: SAG mill operations to include the SAG mill, a ball mill and screen.

II.A.6 **Phosphate Concentrator** (designated as 6)
Unit Description: Includes all operations at concentrator to include conditioners, flotation, and thickener.

II.A.7 **Rotary Dryer #3** (designated as 7)
Unit Description: A natural gas fired rotary dryer with associated baghouse to include a continuous opacity monitor (COM).

II.A.8 **Dry Concentrate Loadout Operations** (designated as 8)
Unit Description: Includes concentrate conveyors (includes a baghouse at both the transfer point to the elevator and on the elevator itself), enclosed storage bin and truck loading (includes baghouse on the loadout bins), and two teepee style, covered storage bins.

II.A.9 **Tailings Dam Construction** (designated as 9)
Unit Description: Construction activities associated with the Tailings Dam

II.A.10 **Miscellaneous Liquid Storage Tanks** (designated as 10)
Unit Description: 18,500 gallon diesel (at mill), 18,500 gallon sulfuric acid (at mill), 10,000 gallon unleaded gasoline (at mill), 10,500 gallon diesel (at mine), 20,000 gallon diesel (at mine), 4,000 gallon gasoline (at mine), 10,000 gallon gasoline (at mill).

II.A.11 **Access and Mine Roads** (designated as 11)
Unit Description: Paved and unpaved access and mine roads.

II.A.12 **Miscellaneous Space and Water Heaters** (designated as 12)
Unit Description: Miscellaneous natural gas fired space and water heaters.

II.A.13 **Smart Ash Incineration Units** (designated as 13)
Unit Description: Two Smart Ash waste incineration units. No unit-specific applicable requirements.

II.B. **Requirements and limitations.**

The following emission limitations, standards, and operational limitations apply to the permitted facility as indicated: (R307-415-6a(1))

II.B.1 **Conditions on permitted source (Source-wide):**

II.B.1.a Visible emissions shall be less than 20 percent opacity unless otherwise specified in this permit, not including blasting operations and miscellaneous space and water heaters. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.1.a.1 **Monitoring**: Observation of emissions shall be conducted at least once each week of each emission unit identified in this permit, by an individual trained on the requirements of 40 CFR 60, Appendix A, Method 9. The observation shall occur while the equipment is operating; if the equipment is inoperable for any reason for the entire week, no observation of that emission unit is necessary. The individual is not required to be a certified visible emission observer (VEO). If any visible emissions are observed, then an observation of that emission unit must be performed in accordance with Proposed Method 203C (58 FR 61640) within 24 hours of the initial observation.

II.B.1.a.2 **Recordkeeping**: Results of opacity obervations shall be recorded and maintained as described in Provision S.1 in Section I of this permit.

II.B.1.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.b Production of ore shall be no greater than 5,790,000 tons per rolling 12 month total. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.1.b.1 **Monitoring**: The total amount of ore processed each month, in tons, shall be determined by the 10th working day of the succeeding month and recorded in a log. The total shall also be added to the total for the 11 months previous to that month, with the new 12 month total also being recorded in the log.

II.B.1.b.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.1.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.1.c The prescribed burning of vegetation on areas in or surrounding the tails dam drains shall occur on a total area not exceeding 1.25 acres each time burning takes place. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.1.c.1 **Monitoring**: Each time prescribed burning occurs, the total area, to the nearest 1/8 acre shall be recorded in a log.

II.B.1.c.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.1.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2 **Conditions on Overburden Removal Operations (2):**

II.B.2.a Overburden removal shall be no greater than 21,320,000 tons per rolling 12 month total. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.2.a.1 **Monitoring**: The total amount of overburden removed each month, in tons, shall be determined by the 10th working day of the succeeding month and recorded in a log. The total shall also be added to the total for the 11 months previous to that month, with the new 12 month total also being recorded in the log.

II.B.2.a.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.2.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.b The number of blasts shall be no greater than 100 blasts per 12 month rolling period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.2.b.1 **Monitoring**: The total number of blasts each month shall be determined by the 10th working day of the succeeding month and recorded in a log. The total shall also be added to the total for the 11 months previous to that month, with the new 12 month total also being recorded in the log. In addition, the log shall include the date and time of each blast.

II.B.2.b.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.2.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.2.c The active overburden backfill disturbed area shall be no greater than 60 acres. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.2.c.1 **Monitoring**: The active overburden backfill disturbed area shall be surveyed at least once each calendar quarter and the results recorded in a log book.

II.B.2.c.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.2.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.3 **Conditions on Ore Removal Operations (3):**

II.B.3.a The number of blasts shall be no greater than 100 blasts per 12 month rolling period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.3.a.1 **Monitoring**: The total number of blasts each month shall be determined by the 10th working day of the succeeding month and recorded in a log. The total shall also be added to the total for the 11 months previous to that month, with the new 12 month total also being recorded in the log. In addition, the log shall include the date and time of each blast.

II.B.3.a.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.3.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4 **Conditions on Ore Conveying and Crushing Operations (4):**

II.B.4.a All ore conveyor transfer points shall be covered and shall be provided with water sprays. Water sprays shall operate whenever the ore has a moisture content of less than 3% by weight except when the ambient temperature is below freezing or when excused in writing by the Executive Secretary. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.4.a.1 **Monitoring**: The moisture content of the ore shall be determined at least once during the first 10 working days of each month and recorded in a log. Ore samples shall be taken at any point between the ore loading operations and the first 500 feet of the conveyor from the ore dump bin. ASTM Method D2216, D4643, D4959, or equivalent shall be used and identified in the log entry. Equivalency shall be requested in writing to the Executive Secretary.

II.B.4.a.2 **Recordkeeping**: The moisture content results shall be recorded in a log. Additionally, the ambient temperature shall be recorded any time water should be applied but can not be due to freezing conditions.

II.B.4.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.b Moisture content of the material at the base of the stacker shall be no less than 4% by weight. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.4.b.1 **Monitoring**: The moisture content of the ore shall be determined at least once during the first 10 working days of each month and recorded in a log. Ore samples shall be taken from the conveyor within 100 feet of the bottom of the stacker. ASTM Method D2216, D4643, D4959, or equivalent shall be used and identified in the log entry. Equivalency shall be requested in writing to the Executive Secretary.

II.B.4.b.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.4.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.4.c The length of the conveyor shall not exceed 18,000 feet. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.4.c.1 **Monitoring**: The length of the conveyor shall be measured at least once each calendar quarter.

II.B.4.c.2 **Recordkeeping**: The length of the conveyor shall be recorded in a log book at least quarterly.

II.B.4.c.3 **Reporting**: There are no reporting requirements for this provision except those specified

in Section I of this permit.

II.B.4.d Visible emissions shall be less than 10 percent opacity. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.4.d.1 **Monitoring**: Observation of emissions shall be conducted at least once each week of each emission unit identified in this permit, by an individual trained on the requirements of 40 CFR 60, Appendix A, Method 9. The observation shall occur while the equipment is operating; if the equipment is inoperable for any reason for the entire week, no observation of that emission unit is necessary. The individual is not required to be a certified visible emission observer (VEO). If any visible emissions are observed, then an observation of that emission unit must be performed in accordance with Proposed Method 203C (58 FR 61640) within 24 hours of the initial observation.

II.B.4.d.2 **Recordkeeping**: Results of opacity obervations shall be recorded and maintained as described in Provision S.1 in Section I of this permit.

II.B.4.d.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5 **Conditions on Rotary Dryer #3 (7):**

II.B.5.a Natural gas usage shall be less than 463 MMSCF per 12 month period. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.5.a.1 **Monitoring**: Fuel consumption shall be determined within the first 15 calendar days of each month, for the previous month, using fuel bills and/or meter readings. The total shall then be added to the previous 11 months total for a 12 month rolling total. Any adjustments to the total shall be fully explained and justified.

II.B.5.a.2 **Recordkeeping**: Records such as gas bills, gas meter readings and calculations, used to determine compliance with the natural gas consumption limit shall be maintained as described in Provision I.S of this permit.

II.B.5.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.5.b Emissions of PM_{10} shall be less than 1.23 lbs/hour and 0.01 grains/dscf. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.5.b.1 **Monitoring**: Stack testing shall be performed as specified below:

(a) Frequency. Emissions shall be tested after every 2000 hours of operation. The source may also be tested at any time if directed by the Executive Secretary.

(b) Notification. At least 30 days before the test, the source shall notify the Executive Secretary of the date, time, and place of testing and provide a copy of the test protocol. The source shall attend a pretest conference if determined necessary by the Executive Secretary.

(c) The emission sample point shall conform to the requirements of 40 CFR 60, Appendix A, Method 1. In addition, Occupational Safety and Health Administration (OSHA) approved access shall be provided to the test location.

(d) Methods to be used.

(1) For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201, 201a or 202.

(2) For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate.

(e) Calculations. To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Executive Secretary to give the results in the specified units of the emission limitation. In addition, values shall be corrected to standard conditions, i.e., 68 degrees F and 29.92 inches of Hg.

(f) Production Rate During Testing. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous 2000 hours of operation.

II.B.5.b.2 **Recordkeeping**: Results of all stack testing shall be recorded and maintained in accordance with the associated test method and Provision S.1 in Section I of this permit.

II.B.5.b.3 **Reporting**: Results of required stack testing shall be submitted to the Executive Secretary within 45 days of completion of the testing. The submittal shall clearly identify results and indicate compliance status. The annual compliance certification required by Provision L in Section I of this permit shall use the most recent test results as a basis for stating compliance status for this limitation.

II.B.5.c Visible emissions shall be less than 10 percent opacity. [Authority granted under 40 CFR 60.402(a)(1)(ii); condition originated in DAQE-140-97]

II.B.5.c.1 **Monitoring**: The permittee shall calibrate, maintain and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere in accordance with R307-170 and shall record the output of the system whenever the emission unit is in operation. Compliance is to be based on the percent opacity averaged over six consecutive minutes. (origin: 40 CFR 60.403, Subpart NN)

II.B.5.c.2 **Recordkeeping**: Results of opacity observations shall be recorded and maintained as required in R307-170 and as described in Provision I.S.1 of this permit.

II.B.5.c.3 **Reporting**: Reports shall be submitted as outlined in R307-170 and Provision I.S.1 of this permit.

II.B.6 **Conditions on Access and Mine Roads (11):**

II.B.6.a The haul road length shall not exceed 2.5 miles. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.6.a.1 **Monitoring**: The length of the haul road shall be measured and recorded in the log during the first 10 working days of each calendar quarter. A vehicle odometer reading to the nearest 0.1 mile shall be sufficient.

II.B.6.a.2 **Recordkeeping**: The records required for monitoring shall be maintained as described by Provision S.1 in Section I of this permit.

II.B.6.a.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.6.b All active unpaved mining roads and other unpaved operational areas shall be watersprayed. The application rate of water shall be a minimum of 0.25 gallons per square yard and shall be made at least once every two hours during times of operation unless the daily rainfall exceeds 0.10 inches, the road is in a muddy condition or covered with snow, or if the ambient temperature is below freezing. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.6.b.1 **Monitoring**: Records required for this permit condition will serve as monitoring.

II.B.6.b.2 **Recordkeeping**: Records of water treatment shall be kept for all periods of operation. The records shall include, as a minimum, the following items: date and time of day treatments were made; number of treatments made, application rate and quantity; ambient temperature, if below freezing; description of roads, if muddy or wet; and the amount of rainfall received, if any.

II.B.6.b.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.B.6.c The speed of heavy mining vehicles and haul trucks on the haul road shall not exceed 25 mph; the speed of light vehicles shall not exceed 40 mph provided opacity readings are below 20%, otherwise, light vehicles shall not exceed 25 mph. [Authority granted under R307-401-6(1) [BACT]; condition originated in DAQE-140-97]

II.B.6.c.1 **Monitoring**: Speed limit signs shall be posted at the entrance to the active haul road area. Speed of vehicles shall be observed by shift supervisors and violations shall be corrected immediately. At least once each quarter all speed limit signs shall be inspected to assure they are still present.

II.B.6.c.2 **Recordkeeping**: Results of quarterly inspections of the speed limit signs shall be recorded in a log and maintained as described in Provision S.1 in Section I of this permit.

II.B.6.c.3 **Reporting**: There are no reporting requirements for this provision except those specified in Section I of this permit.

II.C. **Emissions Trading.** (R307-415-6a(10))
Not applicable to this source.

II.D. **Alternative Operating Scenarios.** (R307-415-6a(9))

Not applicable to this source.

Section III: PERMIT SHIELD

III.A. A permit shield was not granted for any specific requirements.

Section IV: ACID RAIN PROVISIONS.

IV.A. This source is not subject to Title IV. This section is not applicable.

REVIEWER COMMENTS

This operating permit incorporates all applicable requirements contained in the following documents:

DAQE-140-97 dated February 25, 1997

1: Comment on an item originating in DAQE-140-97 regarding Overburden Removal Operations (Unit 2):

Fugitives to be minimized from overburden backfilling: Condition #14 of Approval Order DAQE-140-97 required the source to minimize fugitive emissions from overburden backfilling by water spraying, chemical suppressants or revegetation as soon as practicable. It is not included in the operating permit for the following reasons:

- the term, minimize, is undefined and therefore difficult, if not impossible, to enforce, as well as certify compliance with;
- another permit requirement limits opacity to less than 20% and;
- the source is required to revegetate under Utah Division of Oil, Gas and Mining permit # M/047/007.

Based on these reasons, this AO condition was not repeated in this permit. [Comment last updated on 5/12/1998]

2: Comment on an item originating in DAQE-140-97 regarding Overburden Removal Operations (Unit 2):

Fugitive emissions from dragline operations: Condition #13 of Approval Order DAQE-140-97 required that the fugitive emissions from dragline operations be minimized by keeping the drop distance as small as practicable. This requirement has not been included in the operating permit because the opacity of emissions is limited to 20% by another condition of the permit. In addition, the term minimize is undefined, again making it difficult to enforce or certify compliance with. [Comment last updated on 5/12/1998]

3: Comment on an item originating in DAQE-140-97 regarding Ore Conveying and Crushing Operations (Unit 4):

Water application rate to phosphate ore: Condition #16 of Approval Order DAQE-140-97 required water to be applied at a rate of 1.70 gallons per ton of ore feed whenever the ore moisture content was below 3%. This requirement has not been incorporated into the operating permit because of its redundant nature, specifically because other conditions require that the ore be water sprayed to keep the moisture content above 3%. In addition, as written, the water must be applied at a very precise rate, i.e., 1.70 gallons per ton of ore feed and doesn't allow for the application of more water if desired. The other condition, written into the operating permit only requires the moisture content to remain above 3% and the amount of water necessary to accomplish this is left to the source. [Comment last updated on 5/12/1998]

4: Comment on an item originating in DAQE-140-97 regarding Ore Conveying and Crushing Operations (Unit 4):

Moisture Content of Material: Condition # 15 of Approval Order DAQE-140-97 required the moisture content to be more than 4% at the base of the stacker and at the top of the stacker, prior to the ore dropping to the stockpile. The top of the stack requirement has not been included in this permit for the following reasons:

- In a practical sense, the moisture content is not going to change from the bottom of the stacker to the top, a distance of only a couple of hundred feet, and
- due to safety considerations. The ore moving on the conveyor is 8 inches and smaller. It is not uncommon that some larger pieces of ore roll back down the stacker. For someone to take a sample for a moisture content test at the top of the stacker exposes them to significant risk of injury. Likewise, it is unsafe to climb the stockpile in an attempt to take a sample from the top of the stockpile both because of material dropping from the stacker, but also because of the bottom feed to the SAG mill.

Consequently, the requirement for a greater than 4% moisture content is only indicated for the bottom of the stacker. [Comment last updated on 5/12/1998]

5: Comment on an item originating in DAQE-140-97 regarding Ore Conveying and Crushing Operations (Unit 4):

Underground feed to the SAG mill: Condition #17 of Approval Order DAQE-140-97 required that the conveyor from the ore storage piles to the SAG mill be an underground feed and enclosed. This requirement has not been included in the operating permit because the conveyor feed system is constructed, fixed in place and operating; in addition, to make a change to this configuration would require a R307-1-3.1 submittal and/or a modification to this permit. Therefore, this requirement is no longer necessary. [Comment last updated on 5/12/1998]

6: Comment on an item originating in 40 CFR 60.402 (Subpart NN) regarding Rotary Dryer #3 (Unit 7):

NSPS Limit Subsumed in Permit Limit: The NSPS limit of 0.06 lb PM per ton of phosphate rock feed (40 CFR 60.402(a)(1)(i)) is not included in this permit because it is less stringent than the limit that the source must meet. The permit has an emission limit of 1.23 lb PM_{10} per hour, which originated in an approval order (DAQE-140-97). This limit evolved from a previous approval order which had a TSP limit of 1.54 lb TSP per hour and it was assumed, when developing the PM_{10} limit, that the PM_{10} to TSP ratio was 80% (1.54 x 0.80 = 1.23). The capacity of the dryer is 60 tons of feed per hour. If operating at maximum capacity, the emissions would be as follows:

(1.54 lb TSP / hour) / (60 tons phosphate feed / hour) = 0.026 lb TSP / ton phosphate feed

Since the 0.026 lb PM per ton of feed is the maximum that the source could emit without exceeding the 1.23 lb PM_{10} per hour limit, and is well below the NSPS limit of 0.06 lb TSP per ton of feed (it's less than half the NSPS limit), the less stringent NSPS limit is not included in the operating permit.

As an added note, the dryer is not generally in operation as the product is pumped to Wyoming for drying and further processing. The dryer is only maintained for surge capacity and hasn't been used for production in several years. [Comment last updated on 5/12/1998]

7: Comment on an item originating in this permit regarding Rotary Dryer #3 (Unit 7):

2000 Hour Stack Test Frequency: The 2000 hour frequency for stack testing was established as a means to not require testing on a unit that is seldom, if ever, used, yet at the same time allow the source to begin using the unit without any advance notice. The rotary dryer is basically dormant and is not used, yet the source desires to have maintain the capability on the outside chance that future demands on the plant would require its use. While no advance notice would be required, the unit would require stack testing at an early date. It is intended that in the event that the unit were to be put into normal production mode, the source would request a modification to this testing frequency to make the testing frequency more appropriate for normal production. [Comment last updated on 5/12/1998]

8: Comment on an item originating in 40 CFR 60.402 (Subpart NN) regarding Dry Concentrate Loadout Operations (Unit 8):

Opacity on Loadout Operations Not Subject to NSPS: 40 CFR 60, Subpart NN limits the opacity from ground phosphate rock handling and storage system[s] at phosphate plants. However, the operations at S.F. Phosphates Vernal operations do not fit the definition of ground phosphate rock handling and storage systems found in the NSPS. Specifically this is because the definition in the NSPS describes a unit, used for the conveyance and storage of ground phosphate rock from grinders, and at S.F. Phosphates the product coming off of the grinder (SAG Mill) is a slurry. Therefore, the NSPS opacity limitation for ground phosphate rock handling and storage systems does not apply to the dry concentrate loadout operations. [Comment last updated on 5/12/1998]

9: Comment on an item originating in AO DAQE-140-97, Condition #12 regarding Access and Mine Roads (Unit 11):

Definition of Active Unpaved Mining Roads: This permit requires all active unpaved mining roads and other unpaved operational areas to be water spayed at rates outlined in the permit. For purposes of this permit, this shall refer to those roads and operational areas being currently used in conjunction with the production and mining process. [Comment last updated on 5/12/1998]

10: Comment on an item originating in DAQE-140-97 regarding permitted source (Source-wide):

Prescribed Burning Limitations: Although the condition in this permit on prescribed burning may appear to be contrary to the state rules which establish certain restrictions on general burning (see UAC R307-1-2.4), it originated the Approval Order for this source (DAQE-140-97) which was issued by the Air Quality Board. In addition, while this is not a horticultural or agricultural operation, the burning that is done is for similar purposes as outlined in the rules. [Comment last updated on 5/12/1998]